# Math Test One

## Difficulty: 10

Name: _____

## 50 Questions In Living Color

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# Directions to Answering Each Question

1. Work the problem to find the answer.
2. Fill in every blank in the question indicated by the black lines.
3. Write the numbers greater than 999 with commas for the thousands, millions, etc. to receive credit.

GO ON TO THE NEXT PAGE TO START THE TEST

# Dust1218 Math Test

**Use pieces of paper to do your work. If you change your answer, be sure to erase the old answer completely.**

1 What is the value of x in the following equation?
$-4x^2 - 26x + 90 = 0$
x = _____

2 Dragonite has a pedometer that tells him how many steps he walked in thousands. As of 8:30 (A.M.), his pedometer shows he walked 0.52 thousand of these steps today.
What is $0.52 \times 10^3$ in standard form?
_____

3 There are 105 questions on test 1 and 50 on test 2, and test 3 has 25 questions. There must be the same number of questions per page across all tests.
What is the highest common factor of 105, 50, and 25?
_____

4 What is the value of x in the following equation?
$7(2 - 3x) = -23.8$
x = _____

5 What is the value of y for all of the following values of x for the following equation?
$y = -1.5x - 4$
When x = -5, y = _____
When x = -4, y = _____
When x = -3, y = _____
When x = -2, y = _____
When x = -1, y = _____
When x = 0, y = _____

6 What are the first 5 terms of the following sequence?
$-2n^2 - 3n - 6$
1st term = _____
2nd term = _____
3rd term = _____
4th term = _____
5th term = _____

7 What is √1331 + √704 in its fully-simplified form?

_____

8 Magmortar is planning on making his own longest movie. However, there is a problem: His friend requires that the movie be 2 1/15 times longer than Magmar's movie, which is 270 minutes long. How long does Magmortar's movie need to be?

_____ minutes

9 What is $580 \times 10^{0}$ in standard form?

_____

10 What is $6^{4} \div 1296^{-3}$ in its fully-simplified form?

_____

11 Bayleef's apples were shared in the ratio:
8 : 9 : 11 : 15 : 4
The smallest share was 12.
What was the largest share?

_____

12 What is (-6) - 19 - (-20) - (-11) - (-16)?

_____

13 $-4x^{2} - 6x - 2$
When this polynomial is fully factorized, what does it turn to?

_____

14 What is 9.44 as a percentage?

_____

15 What is the fully factorized form for this polynomial?
$20x^{4}y^{4} + 110x^{6}y^{5} + 50x^{7}y^{5}$

_____

16 There were LEGO pieces that were shared in the ratio:
3 : 12 : 3 : 8 : 13
221 was the largest share.
What was the smallest one?

_____

17 Given that 11/128 = 0.0859375, what is 267/128 in decimal?

_____

18 One large bead is 820 mg. There are 1,000 large beads in the box. So the mass of all the beads in the box is 820,000 mg.
How many tonnes are there in 820,000 mg?

_____ tonnes

19 What is the solution to the inequality below?
8 + -7x < 20.6

x ___ (=, <, >, ≤, and ≥ only) _____ (Must be a number)

20 What does 3 3/7 ÷ 1 1/3 × 3 6/14 equal to?

_____

21 Sceptile had a bank account balance of -$3 on day 1, but for the next day, he had $17 more. Unfortunately for him, on day 3, he had -$25 added to his bank account. Things turned around for him on day 4 when $20 was put into the bank account. However, that was not before he had a change in bank account balance by -$8 on day 5.
What was Sceptile's bank account balance on day 5?

_____ dollar(s)

22 As an ordinary number, what is $9 \times 10^{-2}$?

_____

23 A Fibonacci-like sequence is as follows:
(Number), (Number), (Number), 5.5, (Number), (Number), 19.5, (Number)
What is the 8th term?

_____

24 A YouTube video has $5 \times 10^4$ views.
What is $5 \times 10^4$ as an ordinary number?

_____

25 What is the solution to the following equation?
6.8 = x + 7
x = _____

26 Some hex nuts are 1 1/2 inches long.
What is 1 1/2 as an improper fraction?

_____

27 What are the following numbers sorted in ascending order?
7, 0, 6

___, ___, ___

28 What does (-2) + (-5) equal to?

_____

29 There is a fee of $9 every time a person eats junk food. The relationship to the money present is as follows:
nth term = -9n
n is the number of times junk food has been eaten.
What are the first 5 terms of the above sequence?
1st term = _____
2nd term = _____
3rd term = _____
4th term = _____
5th term = _____

30 Pikachu has 4 chairs and Raichu has 16. They both want to divide those chairs evenly for both of them.
What is the highest common factor of 4 and 16?

_____

31 Given that 4/16 = 0.25, what is 4/32 as a decimal?

_____

32 Charmander currently has 2 times the number of K'NEX pieces as Squirtle. However, Charmander wants to make a big K'NEX project for Squirtle, and Charmander figures out she does not have enough pieces. She would need 8 times the number of pieces that she has now.
The expression is as follows. x is the unknown number of pieces Squirtle has.
2x × 8
What is the fully-simplified form of the above expression?

_____

33 What is the solution for x for the following equation?
$4x^2 + 14x + 12 = 0$
x = _____

34 8 people share their money equally. Each person in the group has $2,371.
How much money does the group of 8 people have?
$_____

35 What is the solution to this problem?
$6(5x - 6) = 294$
x = _____

36 A few people had plants in their front yard. The number of plants for each person is as follows:
8, 15, 17, 4
What is the mean?
_____

37 An amount of almonds was shared in the ratio:
7 : 6 : 4
The smallest share was 32, but what was the largest share?
_____

38 What is $(2.4 \times 10^9)$ divided by $(4 \times 10^1)$? Write in proper scientific notation.
_____

39 There are three consecutive integers that have a product of 120.
What are they?
____, ____, and ____

40 There are 14 questions on a practice math test, 91 on the real math test, and 21 on another practice math test. The ratio for the questions is:
14 : 91 : 21
What is the ratio when fully simplified?
____ : ____ : ____

41 There are an undisclosed number of marbles in a bag. However, the ratio of blue to yellow to green marbles in the bag is:
9 : 17 : 16
What fraction of the marbles are blue?

_____

42 nth term = $2n^2$
What are the first 5 terms of the above sequence?
1st term = _____
2nd term = _____
3rd term = _____
4th term = _____
5th term = _____

43 What is one and seven-eighths divided by two and one-fourth?

_____

44 What is the nth-term rule for the following sequence?
6.5, 5, 3.5, 2, ...
nth term = _____

45 Garchomp gave some people a weight-loss program. These were the results for weight change over a month for each person:
-3.9, -3.5, -0.8, -3.6, -0.7, -4.1
What was the median amount of weight change? (Do not round)

_____

46 What is the simplified form of the following?
$216^7 \div 1296^2$

_____

47 What is 81 to the 3/2?

_____

48 After expanding and simplifying the following polynomial, what do you get?
3(5x - 5) - 4(3x - 4)

_____

49 What is the value of x in the following equation?

$-8x - 4.8 = -15x + 5$

$x =$ _____

50 Last month, 29 towns altogether had a population change of -1,914. Assuming that the population change was equal for each town, what was the population change for one of those towns?

_____ people

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